

REMARKS

Reconsideration of the instant application is respectfully requested. The present submission is responsive to the Office Action of February 26, 2003, in which claims 1-9 and 18 of group I are presently pending. Of the claims under consideration, claims 1 and 3 have now been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 5,389,814 to Srikrishnan, et al. Claims 1 and 3 are also now rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent 6,033,939 to Agarwala, et al.

In addition, claims 2 and 4 are rejected under 35 U.S.C. §103(a), as being unpatentable over Srikrishnan, in view of U.S. Patent 6,111,301 to Stamper. Claim 5 is rejected under 35 U.S.C. §103(a), as being unpatentable over Srikrishnan, in view of U.S. Patent 6,300,233 to Lee, et al. (Lee). Claim 6 is rejected under 35 U.S.C. §103(a), as being unpatentable over Srikrishnan, in view of Stamper, and in further view of Agarwala. Claims 7 and 8 are rejected under 35 U.S.C. §103(a), as being unpatentable over Srikrishnan, in view of Stamper, Agarwala, and in further view of U.S. Patent 5,590,460 to DiStefano, et al. Claim 9 is rejected under 35 U.S.C. §103(a), as being unpatentable over Srikrishnan, in view of Stamper, Agarwala, DiStefano, and in further view of the publication entitled *Electronic Packaging and Interconnection Handbook*, by Charles A. Harper (Harper). Claim 18 is rejected under 35 U.S.C. §103(a), as being unpatentable over Agarwala, in view of DiStefano.

Alternatively, claims 2, 4 and 6 are rejected under 35 U.S.C. §103(a), as being unpatentable over Agarwala, in view of Stamper. Claim 5 is rejected under 35 U.S.C. §103(a), as being unpatentable over Agarwala, in view of U.S. Patent 6,300,233 to Lee, et al. Finally, claims 7-9 are rejected under 35 U.S.C. §103(a), as being unpatentable over Agarwala, in view of Stamper, and in further view of DiStefano. For the following reasons, however, it is respectfully submitted that the application is in condition for allowance.

Claim 1 has been amended as indicated above to more particularly point out that the organic material encapsulated underneath the conductive layer is in continuous contact with the conductive layer. Support for this amendment is found at least at page 6, line 23 - page 7, line 14 of the specification, and in Figures 7-8. In addition, claim 18 has been amended as indicated above to more particularly point out that the organically filled vias are included in the fuse structure itself. Support for this amendment is found at least at page 4, lines 18-23, page 6, lines 1-4, and page 7, lines 15-24 of the specification, and in Figures 1-5.

§102 rejections

As to the §102 rejections of claims 1 and 3 based on the Srikrishnan reference, the Applicants point out that the claimed "conductive layer completing a conductive path between wiring segments included in a wiring layer" would have to be construed to be both the conducting pattern 400 and the fuse 390 in Srikrishnan in order to complete a conductive path between wiring segments 150. In other words, the conductive pattern 400, by itself, would not complete a conductive path between wiring segments included in a wiring layer. Because only the conducting pattern 400 is shown in contact with the organic material 350 (the fuse portion 390 being insulated from organic material 350 by heat shield 380), the "conductive layer" of Srikrishnan is not in continuous contact with the organic material 350, as now required by claim 1. Thus, the present amendment overcomes the 102 rejections of claims 1 and 3 based on the Srikrishnan reference.

As to the §102 rejections of claims 1 and 3 based on the Agarwala reference, the Applicants again maintain that the BLM pads 10 of Agarwala are not part of the fuse structure disclosed therein, as is set forth in detail in the Applicants' response of May 2, 2003, as well as the amendment dated August 29, 2003. However, in view of the language of amended claim 1, even if the BLM pads 10 could be considered as part of the fuse structure, they are still not in continuous contact with the organic material (element

5) cited in Agarwala, as is plainly evident from Figure 4 of Agarwala. Accordingly, the Applicants traverse the §102 rejections of claims 1 and 3 on this basis.

Notwithstanding the above, the Applicants again point out that claim 1 also recites "said conductive layer *completing a conductive path between wiring segments included in a wiring layer...*" (emphasis added). In this regard, the Examiner has not indicated where this feature is taught or suggested in Agarwala. As stated previously, conductor 10 is a bond pad that only completes a conductive path between solder ball 11 and via 9. However, the solder ball and via are not wiring segments in a wiring layer, as is provided for in claims 1-9. As such, the rejections to claims 1-9 are further traversed on this ground.

The Examiner indicates on page 2, paragraph 3 of the present Office Action, that the Applicants' arguments with respect to claims 1-9 have been considered, but are moot in view of the new ground(s) of rejection. Although a new reference (Srikrishnan) has been applied in the present Office Action, the Examiner has continued to apply Agarwala (now as a 102 reference as well) as an additional ground for rejection, without specifically addressing the Applicants' previous arguments as to the teachings of Agarwala. In this regard, it is respectfully submitted that the Applicants have already overcome any and all claim rejections in which Agarwala is applied as a base reference.

§103 rejections

With regard to the §103 rejections of claims 1-9 based on the various combinations of references as set forth above, the Applicants respectfully submit that the present amendment and arguments as set forth above also overcome each of the §103 rejections of claims 1-9, which are based on the Srikrishnan and Agarwala references. Since neither Srikrishnan nor Agarwala teach or suggest each and every element of claim 1, either alone or in combination of any of the other cited references, the claims dependent therefrom are also allowable over the art of record.

Finally, as to claim 18, the Applicants maintain the position that neither Agarwala nor DiStefano teach the use of a via as part of the fuse structure itself, as is required by claim 18. In response to this argument, the Examiner again indicates on page 8 of the Office Action that Agarwala discloses "a pair of vias (9) formed within an insulating layer (6), said pair of vias extending down to said wiring segments (for Example: See Figure 4)..." However, this analysis makes the unwarranted conclusion that simply because vias are shown somewhere in the Agarwala device, that therefore the vias are part of the fuse structure itself. However, this is not the case.

One skilled in the semiconductor arts is well aware that a cross-sectional view of semiconductor structure (including fuseable links featured therein) could also illustrate other features of the device, such as back end of line interconnect materials, for example. Thus, the fact that Agarwala discloses vias somewhere in the patent does not mean that these vias are included in the fuse structure itself, as required by claim 18. On the contrary, a cursory inspection of the Agarwala reference by one skilled in the art will reveal that fuse structure itself includes only the fuse material 5 that interconnects lines 1. Any other interpretation is contrary to the teachings of Agarwala, as well as to the knowledge of one skilled in the art. Accordingly, the Applicants respectfully request the Examiner reconsider and withdraw the present rejection as to claim 18.

For the above stated reasons, it is respectfully submitted that the present application is now in condition for allowance. No new matter has been entered and no additional fees are believed to be required. However, if any fees are due with respect to this Amendment, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,
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